ZOOLOGICAL NAMES

A List of

Phyla, Classes, and Orders

Prepared for

Section F
American Association for the Advancement
of Science

Durham, North Carolina
Duke University Press
1936

QL
353
.P42

ZOOLOGICAL NAMES

A List of

Phyla, Classes, and Orders

MBL/WHOI
0 0301 0063927 0

MARINE BIOLOGICAL LABORATORY
WOODS HOLE
LIBRARY
MASS.

Prepared for

Section F
American Association for the Advancement
of Science

Durham, North Carolina
Duke University Press
1936

INTRODUCTION

American zoological writers who have published books or scientific papers during the past decade show little uniformity in their reference to larger groups of animals. Of course no zoologist wishes to be limited in the choice of names which seem to be most appropriate; no one wishes to have imposed on him terms which he is ordered to use; and none desires to have nomenclature become fixed and inflexible. Of all the rewards that Science gives to her retainers those most prized and enjoyed are independence and the right to change old dogmas as soon as the discovery of new truths makes them illogical. Yet because the species of animals now number several hundreds of thousands, the sorting of species into groups must necessarily be continually more accurate and critical. Furthermore, there are men who through ignorance, inertia, or bigotry take little or no cognizance of the progress of current scientific evidence and opinion. For example, certain writers of recent textbooks use such old terms as Annulata and Anura when the most thoughtful and competent students of annelids and amphibians agree that Annelida and Salientia are to be preferred. Dr. R. E. Snodgrass, who has recently studied the anatomy of onychophorans in detail, is convinced that these animals cannot be called arthropods because their muscular systems have quite different relations to nervous structures from those which obtain in arthropods. Dr. J. P. Moore does not believe that onychophorans may be included among annelids. There seems to be no alternative but to set off Onychophora as a group by itself.

Those who know animals and their classifications in detail perhaps may enjoy using various names for the same group and delight in thus displaying their technical knowledge, but a novice who refers to two or three textbooks and finds the same group called by two or three names is greatly confused. In an attempt to bring about greater uniformity and more careful selection in the use of zoological group names the writer was authorized to form an informal committee and to prepare a list of phyla, classes, and orders of animals which would represent current good usage. This action was taken by Section F of the American Association for the Advancement of Science at the Boston Meeting; December, 1933.

Since then many persons who appeared to be interested have been consulted. The following gave advice in connection with the groups mentioned:

Invertebrata: A. H. Clark, B. G. Chitwood, Roy Miner, L. E. Noland, H. S. Pratt, Waldo Schmitt, H. J. Van Cleave.

Protozoa: *L. E. Noland,* and forty-odd protozoologists to whom he sent a questionnaire.

Porifera: *H. V. Wilson.*

Coelenterata: *Elizabeth Deichmann* (except Zoantharia).

Aschelminthes: *B. G. Chitwood,* M. C. Hall.

Platyhelminthes: E. B. Price.

Cestoda: *G. R. La Rue.*

Nemertea: W. R. Coe.

Nemathelminthes: *B. G. Chitwood,* G. Steiner.

Acanthocephala: *H. J. Van Cleave.*

Bryozoa: *R. S. Bassler,* R. C. Osburn.

Echinodermata: A. H. Clark, *H. L. Clark,* E. Kirk.

Brachiopoda: G. A. Cooper.

Enteropneusta: W. E. Ritter.

Annelida: J. P. Moore, A. L. Treadwell.
Arthropoda: H. E. Ewing, R. E. Snodgrass.
Crustacea: E. A. Birge, Norma C. Furtos, H. A. Pilsbry, *Mary J. Rathbun*, Waldo Schmitt, J. P. Visscher, C. B. Wilson.
Pycnogonidia: *L. J. Cole.*
Arachnida: *H. E. Ewing.*
Insecta: C. L. Kennedy, *Z. P. Metcalf*, J. G. Needham, H. G. Barber, H. E. Ewing.
Mollusca: *P. Bartsch*, H. Rehder.
Chordata: C. W. Gilmore, W. K. Gregory.
Tunicata: *W. E. Ritter*, W. G. Van Name.
Pisces: W. K. Gregory, C. L. Hubbs, W. G. Myers.
Amphibia: Helen T. Gaige, *G. K. Noble.*
Reptilia: Helen T. Gaige, G. K. Noble.
Aves: *A. Wetmore.*
Mammalia: *L. R. Dice*, C. W. Gilmore, Remington Kellogg.

Those whose names appear in italics furnished essentially the terms that appear in the following pages. While the writer gladly acknowledges the obligation to those persons and appreciates greatly the work they did, they are not to be held responsible for the published list. The differences of opinion among zoologists in the United States were found to be so great that there was little hope of agreement and the editor finally did what seemed to him best.

Perhaps forty per cent of those consulted strongly urged the use of uniform endings for the larger groups of animals. The difficulty encountered in this connection was that protozoologists, helminthologists, conchologists, ornithologists, etc. had already moved more or less in the direction of uniformity and each group of specialists had a tendency to adopt a diffierent system. After long consideration the editor has used the system in vogue among protozoologists and students of some other groups, as it seemed to be at present more generally in use than any other. The endings are as follows: Phylum and Subphylum, —*a*; Class, —*ea*; Subclass, —ia; Order, —ida; Suborder, —ina. In presenting this report to Section F it is not supposed that uniform endings shall be adopted as official, or even recommended. The zoological world had perhaps best be left to make its own choice. In the list the names in the first column represent what the editor after consultation believes to be best current usage; those in the second column are what a few zoologists would like to see used, but perhaps in presenting these the editor is "a hundred years ahead of his time." In any attempt to attain uniformity difficulties arise. For example, Dr. Steiner points out that two names suggested as suborders under Nematoda are objectionable because identical names already have good standing as genera in the same group (Rhabditina Cobb 1922, Chromadorina Filipjev 1926).

Another matter about which there is wide disagreement is whether there should be few or many groups—the old controversy between "lumpers" and "splitters." Shall there be ten or thirty phyla, or orders of insects? The position has been taken that it is more truthful, and therefore more scientific, to present many groups; otherwise it is necessary to compromise to the extent of grouping things together which have remote or insignificant relationships. To the objection that students cannot be expected to master such a long list of technical jargon there is only one answer. It is better to tell students part of the truth frankly than to falsely affirm that they are learning a complete and simple story. Biology is not always simple and clear. It therefore seems proper to say to a student in an elementary course, "of the thirty-odd phyla of animals, or orders of insects, only ten or a dozen which are of particular biological significance to you will be studied," rather than, "for convenience and simplicity all animals, or all insects, are presented under ten phyla, or orders, which may be easily remembered." Science is truth.

Classification must be expected to grow more complex as knowledge increases and becomes more critical.

In most groups the authors names and the dates following correctly indicate when a particular scientific name was given to a group, but these should be used with caution for in cases where no specialist could be found to furnish accurate information (birds, fishes, etc.), the editor browsed through systematic works and found such information, some of which later proved to be incorrect. For example, some references credited to Lamarck by various writers are for vernacular names which should have no scientific standing as scientific names. The following groups have been carefully corrected by specialists and are believed to be reliable for authors and dates: Protozoa, Porifera, Coelenterata (except Zoantaria), Platyhelminthes, Nemertea, Acanthocephala, Nematoda, Bryozoa, Brachiopoda, Echinodermata, Annelida, Arachnida, Crustacea, Insecta, Tunicata, Amphibia, Reptilia, and Mammalia; other groups may not be.

A. S. Pearse, Editor.

Duke University,
June 1, 1936.

A List of Phyla, Classes, and Orders

Extinct groups are indicated by an asterisk (*).

Kingdom Animalia Linnaeus 1758.....Animalia
Subkingdom Protozoa Goldfus 1820.....Protozoa
Phylum Protozoa Goldfus 1820.....Protozoa
  Subphylum Plasmodroma Doflein 1901.....Plasmodroma
    Class Mastigophora Diesing 1866.....Mastigophorea
      (Flagellata Cohn 1853)
      Subclass Phytomastigophora Calkins 1909.....Phytomastigophoria
        Order Chrysomonadida Stein 1878.....Chrysomonadida
        Order Heterochlorida Pascher 1912.....Heterochlorida
        Order Cryptomonadida Stein 1878.....Cryptomonadida
        Order Dinoflagellida Bütschli 1885.....Dinoflagellida
        Order Euglenida Blochmann 1895.....Euglenida
        Order Chloromonadida Klebs 1893.....Chloromonadida
        Order Phytomonadida Blochmann 1895.....Phytomonadida
      Subclass Zoomastigophora Calkins 1909.....Zoomastigophoria
        Order Pantostomatida Minchin 1912.....Pantostomatida
        Order Protomastigida Klebs 1893.....Protomastigida
        Order Polymastigida Klebs 1893.....Polymastigida
        Order Hypermastigida Grassi 1895.....Hypermastigida
    Class Sarcodina Hertwig and Lesser 1874.....Sarcodinea
      Subclass Rhizopoda Von Siebold 1845.....Rhizopodia
        Order Amoebida Claparède and Lachmann
          1858 .....Amoebida
        Order Proteomyxa Lankester 1909.....Proteomyxida
        Order Testacea Max Schultze 1854.....Testacida
        Order Foraminifera D'Orbigny 1826.....Foraminiferida
        Order Mycetozoa De Bary 1859.....Mycetozoida
      Subclass Actinopoda Calkins 1926.....Actinopodia
        Order Heliozoa Haeckel 1866.....Heliozoida
        Order Radiolaria Johannes Müller 1858.....Radiolarida
    Class Sporozoa Leuckart 1879.....Sporozoea
      Subclass Telosporidia Schaudinn 1900.....Telosporidia
        Order Gregarinida Lankester 1866.....Gregarinida
        Order Coccidiomorpha Doflein 1901.....Coccidiomorphida
          Suborder Coccidia Leuckart 1879.....Coccidina
          Suborder Haemosporidia Danilewsky 1886.....Haemosporina
      Subclass Cnidosporidia Doflein 1901.....Cnidosporidia
        Order Myxosporidia Bütschli 1880.....Myxosporida
        Order Actinomyxidia Stolc 1899.....Actinomyxida
        Order Microsporidia Balbiani 1883.....Microsporida
      Subclass Sarcosporidia Balbiani 1882.....Sarcosporidia
        Order Sarcosporidia Balbiani 1882.....Sarcosporidia
        Order Globidia Bubudieri 1932.....Globidiida
      Subclass Haplosporidia Caullery & Mesnil
          1899 .....Haplosporidia

Subphylum Ciliophora Doflein 1901.....Ciliophora
Class Ciliata Perty 1852.....Ciliatea
Subclass Protociliata Metcalf 1918.....Protociliatia
Order Opalinata Stein 1867.....Opalinida
Subclass Euciliata Metcalf 1918.....Euciliatia
Order Holotrichida Stein 1859.....Holotrichida
Suborder Gymnostomina Bütschli 1889.....Gymnostomina
Suborder Trichostomina Bütschli 1889.....Trichostomina
Suborder Astomina Minchin 1912.....Astomina
Order Spirotrichida Bütschli 1889.....Spirotrichida
Suborder Heterotrichina Stein 1859.....Heterotrichina
Suborder Oligotrichina Bütschli 1889.....Oligotrichina
Suborder Tintinnoina Claparede and Lachmann 1858 .....Tintinnoina
Suborder Entodiniomorphina Reichnow 1929 .....Entodiniomorphina
Suborder Hypotrichina Stein 1859.....Hypotrichina
Order Peritrichida Stein 1859.....Peritrichida
Order Chonotrichida Wallengren 1896.....Chonotrichida
Class Suctoria Claparède and Lachmann 1858.....Suctorea
Subkingdom Metazoa Haeckel 1877.....Metazoa
Branch Parazoa Sollas 1884.....Parazoa
Phylum Porifera Grant 1835.....Porifera
Class Calcarea Bowerbank 1864.....Calcarea
Order Homocoela Polejaeff 1883.....Homocoelida
Order Heterocoela Polejaeff 1883.....Heterocoelida
Class Noncalcarea Vosmaer 1887.....Noncalcarea
Order Myxospongida Dendy 1905.....Myxospongida
Order Hexactinellida O. Schmidt 1870.....Hexactinellida
Suborder Amphidiscophora F. E. Schulze 1899 .....Amphidiscophorina
Suborder Hexasterophora F. E. Schulze 1899 .....Hexasterophorina
Order Tetraxonida Dendy 1905.....Tetraxonida
Suborder Homosclerophora Dendy 1905.....Homoscleropherina
Suborder Astrophora Sollas 1888.....Astrophorina
Suborder Hadromerina Topsent 1898.....Hadromerina
Suborder Sigmatophora Sollas 1888.....Sigmatopherina
Suborder Halichondrina Vosmaer 1887.....Halichrondrina
Suborder Lithistida O. Schmidt 1870.....Lithistidina
Order Keratosa Grant 1861.....Keratosida
Branch Enterozoa Lankester 1878.....Enterozoa
Subbranch Enterocoela Lankester 1900.....Enterocoela
Phylum Coelenterata Leuckart 1848.....Coelenterata
Subphylum Cnidaria Milne Edwards & Haime 1857...Cnidara
Class Hydrozoa Huxley 1857.....Hydrozoea
Order Hydroida Leuckart 1857.....Hydroida
Order Trachylina Haeckel 1877.....Trachylida
Order Milleporina Hickson 1899.....Milleporida
Order Stylasterina Hickson 1899.....Stylasterida

Order Siphonophora Eschscholtz 1829.....Siphonophorida
Suborder Calycophorae Leuckart 1854.....Calycophorina
Suborder Rhizophysaliae Chun 1882.....Rhizophysalina
Suborder Chondrophorae Chamisso & Eysenhard 1821 .....Chondrophorina
Class Scyphozoa Grobben 1910.....Scyphozoea
Order Lucernariidea Johnston 1847.....Lucernarida
Order Charybdeidea Gegenbaur 1856.....Charybdida
Order Corona Vanhoffen 1892.....Coronida
Order Semastomeae L. Agassiz 1862.....Semastomida
Order Rhizostomeae Cuvier 1799.....Rhizostomida
Class Anthozoa Ehrenberg 1834.....Anthozoea
Subclass Alcyonaria Milne-Edwards & Haime 1857 .....Alcyonaria
Order Stolonifera Hickson 1883.....Stoloniferdia
Order Telestacea Hickson 1930.....Telestacida
Order Alcyonacea Verrill 1866.....Alcyonacida
Order Gorgonacea Verrill 1866.....Gorgonacida
Suborder Pseudaxonia Koch 1878.....Pseudaxonina
Suborder Axifera Koch 1873.....Axiferina
Order Coenothecalia Bourne 1900.....Coenothecalida
Order Pennatulacea Verrill 1866.....Pennatulacida
Subclass Zoantharia Blainville 1830.....Zoantharia
Order Cerianthidea Milne-Edw. & Haime 1857 .....Cerianthida
Order Antipitharia Dana 1846.....Antipithida
Order Zoanthidea Dana 1846.....Zoanthida
Order Edwardsiidea R. Hertwig.....Edwardsiida
Order Proactiniae McMurrich .....Proactinida
Order Actiniaria McMurrich .....Actiniarida
Suborder Protanthia Carlgren .....Actiinina
Suborder Nynanthia .....Stichodactylinina
Order Madreporaria Linnaeus 1748 .....Madreporerarida
Suborder Aporosa Milne-Edw. & Haime 1857.....Aporosina
Suborder Fungacea Milne-Edw. & Haime 1857 .....Fungacina
Suborder Perforata Milne-Edw. & Haime 1857 .....Perforina
Subphylum Acnidaria Krumbach 1925.....Acnidara
Class Tentaculata Wagner 1834.....Tentaculatea
Order Cydippidea Lesson 1843.....Cydippida
Order Lobata Eschscholtz 1829.....Lobatida
Order Cestoidea Lesson 1843.....Cestida
Order Platyctenea Bourne 1900.....Platyctenida
Class Nuda Bourne 1900.....Nudea
Order Beroidea Eschscholtz 1929.....Beroida
Subbranch Triploblastica Lankester 1900.....Triploblastica
Enterocoela Lankester 1876.....Enterocoela
Series Parenchymata .....Parenchymata
Phylum Platyhelminthes Gegenbaur 1859.....Platyhelmintha Vogt 1851
Class Turbellaria Ehrenberg 1831.....Turbellarea
Order Acoela Uljanin 1870.....Acoelida

Order Rhabdocoela Ehrenberg 1831 ..... Rhabdocoelida
Order Alloecoela Graff 1882 ..... Alloecoelida
Order Tricladida Ehrenberg 1831 ..... Tricladida
Order Polycladida Lang 1882 ..... Polycladida
Order Temnocephalida Haswell 1888 ..... Temnocephalida
Class Trematoda Rudolphi 1808 ..... Trematodea
Subclass Monogenea Carus 1863 ..... Monogenia
Order Monopisthocotylea Odhner 1912 ..... Monopisthocotylida
Order Polyopisthocotylea Odhner 1912 ..... Polyopisthocotylida
Subclass Digenea Carus 1863 ..... Digenia
Order Gasterostomata Odhner 1905 ..... Gasterostomatida
Order Prosostomata Odhner 1905 ..... Prostomatida
Suborder Aspidocotylea Burmeister 1856 ..... Aspidocotylina
Suborder Monostomata Zeder 1800 ..... Monostomatina
Suborder Strigeidea La Rue 1926 ..... Strigeina
Suborder Amphistomata Rudolphi 1801 ..... Amphistomatina
Suborder Distomata Leuckart 1856 ..... Distomatina
Class Cestoidea Rudolphi 1808 ..... Cestodea
Subclass Cestodaria Monticelli 1892 ..... Cestodaria
Order Amphilinidea Poche 1922 ..... Amphilinida
Order Gyrocotylidea Benham 1901 ..... Gyrocotylida
Subclass Cestoda van Beneden 1849 ..... Cestodia
Order Pseudophyllidea van Beneden 1850 ..... Pseudophyllida
Order Tetraphyllidea Schmarda 1871 ..... Tetraphyllida
Order Cyclophyllidea Braun 1900 ..... Cyclophyllida
Class Nemertea Siebold and Stannius 1842 ..... Nemertea
Order Paleonemertea Hubrecht 1879 ..... Paleonemertida
Order Heteronemertea Bürger 1892 ..... Heteronemertida
Order Hoplonemertea Hubrecht 1879 ..... Hoplonemertida
Suborder Polystilifera Brinkmann 1917 ..... Polystiliferina
Suborder Monostilifera Brinkmann 1917 ..... Monostiliferina
Order Bdellonemertea Verrill 1892 ..... Bdellonemertida
Phylum Acanthocephala Rudolphi 1808 ..... Acanthocephala
Class Echinorhynchidea Cobbold 1879 ..... Echinorhynchea
Order Palaeacanthocephala Meyer 1931 ..... Palaeacanthocephalida
Order Archiacanthocephala Meyer 1931 ..... Archiacanthocephalida
Order Eoacanthocephala Van Cleave 1936 ..... Eoacanthocepdalida
Suborder Gyracanthocephala Van Cleave 1936 ..... Gyracanthocephalina
Suborder Neoacanthocephala Van Cleave 1936 ..... Neoacanthocephalina
Series Coelomocoela Lankester 1900 ..... Coelomocoela
Subseries Prosopygia Lang ..... Prosopyga
Subseries Aschelminthes Grobben 1909 ..... Aschelmintha
Phylum Rotatoria Lamarck 1816 ..... Rotatoria
Class Seisonidea Plate 1886 ..... Seisonidea
Class Belloidea Hudson & Gosse 1889 ..... Belloidea
Class Monogononta Ehrenberg 1832 ..... Monogonontea
Order Plioma Hudson & Gosse 1889 ..... Pliomida
Order Floscularíacae Harring 1913 ..... Floscularida
Order Collothecacae Harring 1913 ..... Collothecida

Phylum Gastrotricha Metchnikof 1865.....Gastrotricha
Order Macrodasyoidea Zelinka 1889.....Macrodasyida
Order Chaetonotoidea Zelinka 1883.....Chaetonotida
Phylum Echinodera (Kinorhyncha Leuckart 1854)...Echinodera
Phylum Nematomorpha Potts 1908.....Nematomorpha
Class Gordididea Orthepp 1924.....Gordiacea
Class Nectonematoidea Rauther 1930.....Nectonematidea
Phylum Nematoda Rudolphi 1808.....Nemata Cobb, 1919
Class Phasmidia Chitwood and Chitwood 1933.....Phasmidea
Order Rhabditida Chitwood 1933.....Rhabditida
Suborder Rhabditata Chitwood 1933.....Rhabditina
Suborder Ascaridata Skrjabin 1915.....Ascaridina
Suborder Strongylata Railliet & Henry 1913 .....Strongylina
Order Spirurida Chitwood 1933.....Spirurida
Suborder Spirurata Raillett and Henry 1913 .....Spirurina
Suborder Camallanata Chitwood 1936.....Camallanina
Class Aphasmidia Chitwood and Chitwood 1933.....Aphasmidea
Order Enoplida Chitwood 1933.....Enoplida
Suborder Enoplata Filipjev 1929.....Enoplina
Suborder Dorylaimata Chitwood 1933.....Dorylaimina
Suborder Dioctophymata Skrjabin 1923.....Dioctophymatina
Order Chromadorida Chitwood 1933.....Chromadorida
Suborder Monhysterata Filipjev 1929.....Monhysterina
Suborder Desmoscolecata Filipjev 1929.....Desmoscolecina
Suborder Chromadorata Filipjev 1929.....Chromadorina
Phylum Tardigrada Spallanzani 1776.....Tardigrada
Class Heterotardigrada Marcus 1927.....Heterotardigradea
Order Arthrotardigrada Marcus 1927.....Arthrotardigradida
Order Echiniscoidea Richters 1926.....Echiniscida
Class Eutardigrada Richters 1926.....Eutardigradea
Phylum Chaetognatha Leuckart 1854.....Chaetognatha
Phylum Bryozoa Ehrenberg 1831.....Bryozoa
Class Entoprocta Nitsche 1869.....Entoproctea
Class Ectoprocta Nitsche 1869.....Entoproctea
Subclass Gymnolaemata Allman 1856.....Gymnolaemia
Order Ctenostomata Busk 1852.....Ctenostomida
Order Cyclostomata Busk 1852.....Cyclostomida
Suborder Tubipora Hagenow 1851.....Tubiporina
Suborder Cerioporina Hagenow 1851.....Cerioporina
Suborder Ceramoporoidea Bassler 1913.....Ceramoporina
Suborder Hederelloidea Bassler 1934.....Hederellina
Order Trepostomata Ulrich 1883.....Trepostomida
Order Cryptostomata Vine 1883.....Cryptostomida
Order Cheilostomata Busk 1852.....Cheilostomida
Suborder Anasca Levinsen 1909.....Anascina
Suborder Ascophora Levinsen 1909.....Ascophorina
Subclass Phylactolaemata Allman 1856.....Phylactolaemia

Phylum Brachiopoda Cuvier 1802.....Brachiopoda
Order Palaeotremata Thompson 1927.....Paleotrematida
Order Atremata Beecher 1891.....Atrematida
Order Neotremata Beecher 1891.....Neotrematida
Order Protremata Beecher 1891.....Protrematida
Order Telotremata Beecher 1891.....Telotrematida
Phylum Pterobranchia Lankester 1877.....Pterobrancha
Phylum Enteropneusta Gegenbaur 1870.....Enteropneusta
Class Balanoglossida Delle Chiaje 1820.....Balanoglossea
Phylum Echinodermata Laske 1778.....Echinodermata
Subphylum Pelmatozoa Leuckart 1848.....Pelmatozoa
Class *Cystoidea von Buch 1844.....*Cystoidea
Order *Amphoridea Haeckel 1896.....*Amphoroida
Order *Rhombifera Zittel 1879.....*Rhombiferida
Order *Diploporita Zittel 1879.....*Diploporida
Order *Aporita Zittel 1879.....*Aporida
Order *Edrioasteroida Billings 1858.....*Edrioasterida
Class *Blastoidea Say 1825.....*Blastoidea
Order *Protoblastoida Bather 1899.....*Protoblastida
Order *Eublastoida Bather 1899.....*Eublastida
Class Crinoidea Miller 1821.....Crinoidea
Order *Camerata Wachsmuth and Springer 1885 .....*Camerida
Order *Adunata Bather 1899.....*Adunida
Order Flexibilia Zittel 1879.....Flexibilida
Suborder *Sagenocrinida Springer 1926.....*Sagenocrinina
Suborder Taxocrinida Springer 1926.....Taxocrinina
Order *Inadunata Wachsmuth and Springer 1885 .....*Inadunida
Suborder *Larviformia Wachsmuth and Springer 1885 .....*Larvina
Suborder *Fistulata Wachsmuth and Springer 1885 .....*Fistulina
Order Articulata, Miller 1821.....Articulatida
Suborder Bourgueticrinida H. L. Clark Mss. .....Bourgueticrinina
Suborder Pentacrinida Claus 1868.....Pentacrinina
Suborder Holopida Haeckel 1896.....Holopina
Order Comatulida (Parks 1891) A. H. Clark 1908 .....Comatulida
Suborder Oligophreata A. H. Clark 1908.....Oligophreina
Suborder Macrophreata A. H. Clark 1908.....Macrophreina
Subphylum Asterozoa Leuckart 1848.....Asterozoa
Class Asteroidea Burmeister 1837.....Asterea
Order Phanerozonia Sladen 1889.....Phanerozonida
Order Spinulosa Perrier 1894.....Spinulosida
Order Forcipulata Perrier 1894.....Forcipulatida
Class Ophiuroidea Norman 1865.....Ophiurea
Subclass *Aegophiurida Matsumoto 1915.....*Aegophiuria
Order *Lysophiurida Matsumoto 1913.....*Lysophiurida

Subclass Myophiurida Matsumoto 1915.....Myophiuria
Order *Ophiocystiida H. L. Clark Mss.....*Ophiocystiida
Order *Aganasterida H. L. Clark Mss.....*Aganasterida
Order Phrynophiurida Matsumoto 1915.....Phrynophiurida
Order Laemophiurida Matsumoto 1915.....Laemophurida
Order Gnathophiurida Matsumoto 1915.....Gnathophurida
Order Chilophiurida Matsumoto 1915.....Chilophiurida
Subphylum Echinozoa Leuckart 1848.....Echinozoa
Class Echinoidea Bronn 1860.....Echinoea
Order *Bothriocidaroida Duncan 1889.....Bothriocidarida
Order Cidaroida Duncan 1889.....Cidarida
Order Centrechinoida Jackson 1912.....Centrechinoida
Suborder Aulodonta Jackson 1912.....Aulodontina
Suborder Stirodonta Jackson 1912.....Stirodontina
Suborder Camarodonta Jackson 1912.....Camarodontina
Order Exocycloida Jackson 1912.....Exocycloida
Suborder Holectypina Gregory 1900.....Holectypina
Suborder Echinoneina Hawkins 1925.....Echinoneina
Suborder Clypeastrina Gregory 1900.....Clypeastrina
Suborder Nucleolitina Hawkins 1925.....Nucleolitina
Suborder Cassidulina Hawkins 1925.....Cassidulina
Suborder Urechinina H. L. Clark 1925.....Urechinina
Suborder Spatangina Jackson 1912.....Spatangina
Order Plesiocidaroida Jackson 1912.....Plesiocidarida
Order Echinocystoida Jackson 1912.....Echinocystina
Order Perichoechinoida Jackson 1912.....Periechoechinida
Class Holothurioidea Semper 1868.....Holothurea
Order Dendrochirota MacBride 1909.....Dendrochirotida
Order Elasipoda Theel 1882.....Elasipodida
Order Aspidochirota MacBride 1909.....Aspidochirotida
Order Molpadonia Ekman 1925.....Molpadonida
Order Apoda Lampert 1885.....Apodida
Phylum Annelida Lamarck 1809.....Annelida
Class Archiannelida Hatschek 1878.....Archiannelidea
Class Polychaeta Grube 1850.....Polychaetea
Subclass Phanerocephala Benham 1894.....Phanerocephalia
Order Nereidiformia Benham 1894.....Nereiida
Order Spioniformia Soderström 1900.....Spioniida
Order Terebelliformia Benham 1894.....Terebellida
Order Capitelliformia Benham 1894.....Capitellida
Order Scoleciformia Benham 1894.....Scolecida
Subclass Cryptocephala Benham 1894.....Cryptocephalia
Order Sabelliformia Benham 1894.....Sabellida
Order Hermelliformia Benham 1894.....Hermellida
Class Myzostoma Graff 1884.....Mysostomea
Class Oligochaeta Grube 1850.....Oligochaetea
Subclass Archioligochaeta Michaelsen 1921 .....Archioligochaetia
Subclass Neoligochaeta Michaelsen 1921.....Neoligochaetia
Class Hirudinea Lamarck 1818.....Hirudinea
Order Rhynchobdellida Blanchard 1887.....Rhynchobdellida

Order Gnathobdellida Vaillant 1890.....Gnathobdellida
Order Pharyngobdellida Johansson 1913.....
Class Echiurida Savigny 1817.....Echiurea
Phylum Gephyrea Quatrefages 1866.....Gephyra
Class Priapulida Savigny 1817.....Priapulidea
Class Sipunculoidea Quatrefages 1866.....Sipunculidea
Phylum Onychophora Grube 1851.....Onychophora
Phylum Arthropoda Siebold and Stannius 1845.....Arthropoda
Subphylum *Trilobita Schlotheim 1820.....*Trilobita
Class *Hypoparia Beecher 1897.....*Hypoparea
Class *Opisthoparia Beecher 1897.....*Opisthoparea
Class *Proparia Beecher 1897.....*Proparea
Subphylum Chelicerata .....Chelicerata
Class Merostomata Woodward 1878.....Merostomatea
Order *Eurypterida Burmeister 1843.....*Eurypterida
Order *Synxiphosura Packard 1885.....*Synxiphosurida
Order Xiphosura Latreille 1806.....Xiphosurida
Class Pycnogonida Latreille 1804.....Pycnogonidea
Order Colossendeomorpha Cole 1905.....Colossendeomorphida
Order Nymphonomorpha Pocock 1904.....Nymphonomorphida
Order Ascorhynchomorpha Pocock 1904.....Ascorhynchomorphida
Order Pycnogonomorpha Pocock 1904.....Pycnogonomorphida
Class Arachnida Lamarck 1815.....Arachnidea
Order Scorpionida Latreille 1810.....Scorpionida
Order Palpigrada Thorell 1888.....Palpigradida
Order Pedipalpi Latreille 1806.....Pedipalpida
Suborder Uropygi Thorell 1882.....Uropygina
Suborder Amblypygi Thorell 1883.....Amblypigina
Order Solpugida Sundevall 1833.....Solpugida
Order *Anthracomarti Karsch & Scudder.....*Anthracomartida
Order Phalangida Latreille 1802.....Phalangida
Suborder Cyphophthalmi Simon 1879.....Cyphophthalmina
Suborder Laniatores Thorell 1876.....Laniatorina
Suborder Palpatores Thorell 1876.....Palpatorina
Order Chelonethida Duges 1834.....Chelonethida
Order Acarina Nitzsch 1818.....Acarinida
Suborder Notostigmata With.....Notostigmina
Suborder Eupodoidea Banks 1894.....Eupodina
Suborder Trombidoidea Banks 1894.....Trombidina
Suborder Hydrachnoidea Banks 1894.....Hydrachnina
Suborder Ixodoidea Leach 1815.....Ixodina
Suborder Parasitoidea Banks 1915.....Parasitina
Suborder Holothyroidea Reuter.....Holothyrodina
Suborder Oribatoidea Banks 1894.....Oribatina
Suborder Sarcoptoidea Banks 1915.....Sarcoptina
Suborder Demodicoidea Banks 1894.....Demodicina
Suborder Linguatulida Thorell 1876.....Linguatulina
Order Ricinulida Latreille 1802.....Ricinulida
Order Araneida Lamarck 1818.....Araneida
Suborder Liphistiomorphae .....Liphistiomorphina
Suborder Mygalomorphae Banks 1905.....Mygalomorphina

Suborder Hypochilomorphae Petrunkevitch 1933 ..... Hypochilomorphina
Suborder Dipneumonomorphae ..... Dipneumonomorphina
Suborder Apneumonomorphae ..... Apneumonomorphina
Subphylum Mandibulata McLeay 1821 ..... Mandibulata
Subphylum Crustacea Pennant 1777 ..... Crustacea
Class Eucrustacea Kingsley 1894 ..... Eucrustacea
Subclass Branchiopoda Lamarck 1801 ..... Branchiopodia
Order Anostraca Sars 1867 ..... Anostracida
Order Notostraca Sars 1867 ..... Notostracida
Order Conchostraca Sars 1867 ..... Conchostracida
Order Leptostraca Claus 1872 ..... Leptostracida
Order Cladocera Latreille 1829 ..... Cladocerida
Suborder Calyptomera Sars 1865 ..... Calyptomerina
Suborder Gymnomera Sars 1865 ..... Gymnomerina
Subclass Ostracoda Latreille 1802 ..... Ostracodia
Order Myodocopa Sars 1866 ..... Myodocopida
Order Cladocopa Sars 1866 ..... Cladocopida
Order Podocopa Sars 1865 ..... Podocopida
Order Platycopa Sars 1866 ..... Platycopida
Subclass Copepoda Latreille 1831 ..... Copepodia
Order Eucopepoda Claus 1875 ..... Eucopepida
Suborder Calanoida Dana 1852 ..... Calanina
Suborder Cyclopoida Burmeister 1834 ..... Cyclopina
Suborder Notodelphyoida Sars 1903 ..... Notodelphyina
Suborder Monstrilloida Sars 1903 ..... Monstrillina
Suborder Caligoida Claus 1885 ..... Caligina
Suborder Lerneopodida Stebbing 1910 ..... Lernaeopodina
Order Branchiura Burmeister 1834 ..... Branchiurida
Suborder Arguloida Wilson 1932 ..... Argulina
Subclass Cirripedia Burmeister 1834 ..... Cirripedia
Order Thoracica Darwin 1854 ..... Thoracida
Suborder Turrilepadomorpha Clarke 1896[1] ..... Turrilepadomorphina
Suborder Lepadomorpha Darwin 1852 ..... Lepadomorphina
Suborder Verrucomorpha Darwin 1854 ..... Verrucomorphina
Suborder Balanomorpha Darwin 1854 ..... Belanomorphina
Order Ascothoracida Lacaze-Duthiers 1883 ..... Ascothoracida
Order Apoda Darwin 1854 ..... Apodida
Order Rhizocephala Fritz Müller 1862 ..... Rhizocephalida
Subclass Malacostraca Latreille 1802 ..... Malacostracia
Series Leptostraca Claus 1880 ..... Leptostracia
Division Phyllocarida Packard 1879 ..... Phyllocarida
Order Nebaliacea Clarke 1882 ..... Nebalida
Order *Rhinocarina Clarke 1882 ..... *Rhinocarida
Order *Ceratiocarina Clarke 1882 ..... *Ceratiocarida
Order *Hymenocarina Clarke 1882 ..... *Hymenocarida
Division *Nahecarida Broili 1928 ..... *Nahecarida
Series Eumalacostraca Grobben 1892 ..... Eumalocostracia

[1] Called Machaerida by Withers (1926), who suggests that these animals are related to annelids.

Division Syncarida Packard 1886.....Syncarida
Order Anaspidacea Thomson 1892.....Anaspida
Division Pericarida Calman 1904.....Pericarida
Order Mysidacea Boas 1883.....Mysidacida
Order Cumacea Kroyer 1846.....Cumacida
Order Tanaidacea Hansen 1895.....Tanaida
Order Isopoda Latreille 1817.....Isopodida
Suborder Flabellifera Sars 1882.....Flabelliferina
Suborder Valvifera Sars 1882.....Valviferina
Suborder Asellota Latreille 1806.....Asellina
Suborder Phreatoicidea Stebbing 1893.....Phreatocina
Suborder Epicaridea Latreille 1831.....Epicarina
Suborder Oniscoidea Sars 1882.....Oniscina
Order Amphipoda Latreille 1816.....Amphipodida
Suborder Gammaridea Dana 1852.....Gammarina
Suborder Hyperiidea Dana 1852.....Hyperiina
Suborder Caprellidea Dana 1852.....Caprellina
Suborder Ingolfiellidea Hansen 1903.....Ingolfiellina
Division Eucarida Calman 1904.....Eucarida
Order Euphausiacea Boas 1883.....Euphausiida
Order Decapoda Latreille 1802.....Decapodida
Suborder Natantia Boas 1879.....Natantina
Suborder Reptantia Boas 1879.....Reptantina
Division Hoplocarida Calman 1904.....Hoplocarida
Order Stomatopoda Latreille 1817.....Stomatopodida
Superclass Progoneata Pocock 1893.....Progoneata
Class Pauropoda Lubbock 1866.....Pauropodea
Class Symphyla Ryder 1880.....Symphylea
Class Diplopoda Latreille 1802.....Diplopodea
Subclass Chilognatha Leach 1814.....Chilognathia
Superorder Opisthandria Verhoeff 1894.....Opisthandrida
Order Limacomorpha Pocock 1894.....Limacomorphida
Order Oniscomorpha Pocock 1887.....Oniscomorphida
Suborder Glomeridia Brandt 1883.....Glomerina
Suborder Sphaerotheria Brandt 1883.....Sphaerotherina
Superorder Proterandria Verhoeff 1894.....Proterandrina
Order Polydesmoidea C. Koch 1847.....Polydesmida
Suborder Polydesmidea Attems 1914.....Polydesmina
Suborder Strongylosomidea Attems 1914.....Strongylosomina
Order Nematomorpha Verhoeff 1913[2] .....Nematophotida
Suborder Chordeumoidea C. Koch 1847.....Chordeumina
Suborder Stemmiuloidea Cook 1895.....Stemmiulina
Suborder Striaroidea Cook 1896.....Striarina
Suborder Lysiopetaloidea Wood 1865.....Lysiopetalina
Order Juliformia Saussure & Humbert 1872.....Julida
Suborder Juloidea Meinert 1868.....Julina
Suborder Spiroboloidea Silvestri 1896.....Spirobolina
Suborder Spirostreptoideae Pocock 1894.....Spirostreptina
Order Colobgnatha Brandt 1834.....Colobgnathida

[2] Nematomorpha Potts 1908 has been used for a group of roundworms (p. 10).

Superclass Opisthogoneata Pocock 1893.....Opisthogonea
Class Chilopoda Latreille 1802.....Chilopodea
Subclass Epimorpha Haase 1880.....Epimorphia
Order Geophilomorpha .....Geophilomorphida
Order Scolopendromorpha Newport 1844.....Scolopendromorphida
Subclass Anamorpha Haase 1880.....Anamorphia
Order Lithobiomorpha Pocock 1895.....Lithobiomorphida
Order Scutigeromorpha Brandt 1840.....Scutigeromorphida
Suborder Lithobioidea Latzell 1880.....Lithobina
Suborder Craterostigmomorphinae
Pocock 1902 .....Craterostigmomorphina
Class Myrientomata Berlese 1909.....Myrientomatea
Order Protura Silvestri 1907.....Proturida
Class Insecta Linnaeus 1758.....Insectea
Subclass Apterygota Lang 1883.....Apterygotia
Order Thysanura Lubbock 1869.....Thysanurida
Order Entotrophi Grassi 1890.....Entotrophida
Order Collembola Lubbock 1869.....Collembolida
Subclass Pterygota Leng 1888.....Pterygotia
Superorder Orthopteroidea Handlirsch 1903.....Orthopteria
Order Grylloblattodea Walker 1914.....Grylloblattida
Order Orthoptera Latreille 1796.....Orthopterida
Suborder Tettigoniodea Kary 1903.....Tettigonina
Suborder Acridodoa Burmeister 1829.....Acridina
Order Phasmitodea Leach 1815.....Phasmatida
Order Embiodea Kusnesow 1903.....Embioida
Order Diploglossata Saussure 1879.....Diploglossida
Order Dermaptera Degeer 1773.....Dermapterida
Superorder Blattaeformia Handlirsch.....Blattaenia
Order Blattariae Latreille 1810.....Blattida
Order Mantodea Burmeister 1829.....Mantida
Superorder Psocoidea Leach 1918.....Psocia
Suborder Isoptera Brulle 1832.....Isopterina
Suborder Zoraptera Silvestri 1913.....Zorapterina
Order Corrodentia (Psocoptera)
Burmeister 1839 .....Corrodentida (Psocida)
Order Mallophaga Nitzsch 1818.....Mallophagida
Order Anoplura Leach 1815.....Anoplurida
Superorder Hemipteroidea Linnaeus 1758.....Hemipteria
Order Thysanoptera Haliday 1836.....Thysanopterida
Order Heteroptera Latreille 1825.....Heteropterida
Order Homoptera Latreille 1817.....Homopterida
Suborder Auchenorrhyncha Dumeril 1806.....Auchenorrhynchina
Suborder Sternorrhyncha Amyot et
Serville 1843 .....Sternorrhynchina
Suborder Coleorrhyncha Brues and
Melander 1932 .....Coleorrhynchina
Superorder Pseudoneuropteroidea
Gerstaecker 1856 .....Pseudoneuropteria
Order Odonata Fabricus 1792.....Odonatida
Order Ephemeroptera Haeckel 1896.....Ephemerida

Order Plecoptera Burmeister 1835.....Plecopterida
Superorder Coleopteroidea Handlirsch 1906.....Coleopteria
Order Coleoptera Linnaeus 1758.....Coleopterida
Suborder Adephaga Leconte and Horne 1883 .....Adephagina
Suborder Polyphaga Emery 1885.....Polyphagina
Order Strepsiptera Kirby 1813.....Strepsipterida
Superorder Neuropteroidea Handlirsch 1903.....Neuropteria
Order Megaloptera Latreille 1802.....Megalopterida
Order Rhaphidiodea Aclque 1897.....Rhaphidida
Order Neuroptera Linnaeus 1758.....Neuropterida
Order Mecoptera Packard 1886.....Mecopterida
Order Trichoptera Kirby 1813.....Trichopterida
Order Lepidoptera Linnaeus 1758.....Lepidopterida
Suborder Jugatae Comstock 1892.....Jugatina
Suborder Frenatae Comstock 1892.....Frenatina
Suborder Rhapalocera Boisdurk 1836.....Rhopalocerina
Superorder Hymenopteroidea Linnaeus 1758.....Hymenopteria
Order Hymenoptera Linnaeus 1758.....Hymenopterida
Suborder Chalastogastra Konow 1897.....Chalastogastrina
Suborder Clistogastra Konow 1905.....Clistogastrina
Superorder Dipteroidea Linnaeus 1905.....Dipteria
Order Diptera Linnaeus 1758.....Dipterida
Suborder Nematocera Brauer 1883.....Nematocerina
Suborder Brachycera Macquart 1834.....Brachycerina
Order Siphonaptera Latreille 1825.....Siphonapterida
Order *Palaeodictyoptera Goldenberg .....Palaeodictyopterida
Order *Protoblattoidea Handlirsch 1906.....Protoblattida
Order *Protoephemeroidea .....Protoephemerida
Order *Protodonata Brogniart .....Protodonatida
Order *Permodonata .....Permodonatida
Order *Hadentomoidea Handlirsch 1906.....Hadentomida
Order *Hapalopteroidea Handlirsch 1906.....Hapalopterida
Order *Mixotermitoidea Handlirsch 1906.....Mixotermitida
Order *Protorthoptera Handlirsch 1906.....Protorthopterida
Order *Protohemiptera Handlirsch.....Protohemipterida
Phylum Mollusca Linnaeus 1758.....Mollusca
Subphylum Isopleura Lankester.....Isopleura
Class Amphineura von Ihering 1876.....Amphineurea
Order Polyplacophora Gray 1821.....Polyplacophorida
Suborder Eoplacophora Pilsbry 1892.....Eoplacophorina
Suborder Mesoplacophora Pilsbry 1892.....Mesoplacophorina
Suborder Teleoplacophora Pilsbry 1892.....Teleoplacophorina
Order Aplacophora von Ihering 1877.....Aplacophorida
Suborder Neomeniomorpha von Ihering 1877 .....Neomeniomorphina
Suborder Chaetodermomorpha von Ihering 1877 .....Chaetodermomorphina
Subphylum Prorhipidoglossomorpha Grobben.....Prorhipidoglossomorpha
Class Gastropoda Cuvier 1798.....Gastropodea
Subclass Streptoneura Spengel 1881.....Streptoneuria

Order Aspidobranchia Schweigger.....Aspidobranchida
Suborder Docoglossa Troschel 1866.....Docoglossina
Suborder Rhipidoglossa Troschel 1866.....Rhipidoglossina
Order Pectinibranchia Cuvier 1817.....Pectinibranchida
Suborder Taenioglossa Troschel 1866.....Taenioglossina
Suborder Stenoglossa .....Stenoglossina
Subclass Euthyneura Spengel 1881.....Euthyneuria
Order Opisthobranchia Milne-Edwards.....Opisthobranchida
Suborder Tectibranchia Cuvier 1817.....Tectibranchina
Suborder Nudibranchia Cuvier 1817.....Nudibranchina
Order Pulmonata Ehrenberg 1831.....Pulmonatida
Suborder Basommatophora A. Schmidt.....Basommatophorina
Suborder Stylommatophora A. Schmidt.....Stylomatophorina
Class Scaphopoda Bronn 1862.....Scaphopodea
Class Pelecypoda Goldfuss 1820.....Pelecypodea
Order Protobranchia .....Protobranchida
Suborder Solenomyacea Swainson 1840.....Solenomyacina
Suborder Nuculacea Orbigny 1844.....Nuculacina
Order Filibranchia .....Filibranchida
Suborder Anomiacea Herrmannsen 1855.....Anomiacina
Suborder Arcacea Latreille 1825.....Arcacina
Suborder Mytilacea Latreille 1825.....Mytilacina
Suborder Pectinacea Reeve 1841.....Pectinacina
Suborder Dimyacea Lamarck 1807.....Dimyacina
Order Eulamellibranchia .....Eulamellibranchida
Suborder Ostracea Lamarck 1809.....Ostracina
Suborder Submytilacea Ferussac .....Submytilacina
Suborder Tellinacea Lamarck 1819.....Tellinacina
Suborder Veneracea Menke 1828.....Veneracina
Suborder Cardiacea Lamarck 1809.....Cardiacina
Suborder Chamacea Geinitz 1864.....Chamacina
Suborder Myacea Menke 1828.....Myacina
Suborder Adesmacea Blainville 1824.....Adesmacina
Suborder Anatinacea Dall 1895.....Anatinacina
Order Septibranchia Latreille 1825.....Septibranchida
Subphylum Siphonopoda Haan 1825.....Siphonopoda
Class Cephalopoda Cuvier 1798.....Cephalopodea
Order Tetrabranchia Owen 1832.....Tetrabranchida
Suborder Nautiloidea Lamarck 1809.....Nautiloidina
Suborder *Ammonitoidea Haan 1825.....*Ammonitina
Order Dibranchia Owen 1832.....Dibranchida
Suborder Decapoda Leach 1817[3].....Decapodina
Suborder Octopoda Hasselquist 1850.....Octopodina
Phylum Chordata .....Chordata
Division Acraniata .....Acraniata
Subphylum Tunicata Lamarck 1815.....Tunicata
Class Larvacea Herdman 1882.....Larvaca (Copelata)
Class Ascidiacea Blainville 1825.....Ascidiacea
Order Ptychobranchia Seeliger 1909.....Ptychobranchida
Order Aspiraculata Seeliger 1909.....Aspiraculatida

[3] Decapoda Latreille 1802 in an order of crustaceans (p. III).

Order Dictyobranchia Seeliger 1909.....Dictobranchida
Order Krikobranchia Seeliger 1909.....Krikobranchida
Order Pyrosomida Jones 1848.....Pyrosomida
Class Thaliacea Vander Hoeven 1850.....Thaliacea
Order Salpida Jones 1848.....Salpida
Order Doliolida Keferstein 1862.....Doliolida
Subphylum Leptocardii J. Müller 1845.....Leptocardia
Class Amphioxi J. Müller 1844.....Amphioxea
Order Amphioxi J. Müller 1844.....Amphioxida
Division Craniata .....Craniata
Superclass Pisces Linnaeus 1758.....Piscea
Class Agnatha.....Agnathea
Subclass *Ostracodermi Cope 1889.....*Ostracodermia
Order *Heterostraci Lankester 1868.....*Heterostracida
Order *Osteostraci Lankester 1868.....*Osteostracida
Order *Anaspida Traquair 1899.....*Anaspida
Order *Palaeospondyloidea Sollas 1903.....*Palaeospondylida
Subclass Marsipobranchii Bonaparte 1837.....Marsipobranchia
Order Hyperotreti Müller 1836.....Hyperotretida
Order Hyperoartii Müller 1836.....Hyperoartida
Class Placodermi McCoy 1848.....Placodermea
Order *Arthrodira Cope 1891.....*Arthrodirida
Suborder *Acanthaspida Newberry 1889 .....*Acanthaspidina
Suborder *Coccosteoidea Woodward 1891.....*Coccosteina
Suborder *Homosteoidea Traquair 1889.....*Homosteina
Suborder *Ptyctodontoidea Woodward 1891.....*Ptyctodontina
Order Antiarchi Cope 1885.....Antiarcida
Class Chondrichthyes J. Müller 1846.....Chondrichthea
Order Acanthodii Owen 1860.....Acanthodida
Order Stegoselachii .....Stegoselachida
Order Cladoselachii Dean 1894.....Cladoselachida
Order Pleuracanthodii Cope 1889.....Pleuracanthodida
Order Elasmobranchii Bonaparte 1832.....Elasmobranchida
Suborder Selachii Cuvier 1829.....Selachina
Suborder Batoidea Gunther 1870.....Batina
Order Rhenanida .....Rhenanida
Order Bradyodonti .....Bradyodontida
Order Holocephali Bonaparte 1832.....Holocephalida
Class Osteichthyes .....Osteichthyea
Subclass Actinopterygii Cuvier 1828.....Actinopterygia
Order Chondrostei J. Müller 1846.....Chrondrostida
Suborder Palaeoniscoidea Bridge 1879.....Palaeoniscina
Suborder Polypterini Bonaparte 1837..... ..Polypterina
Suborder Belonorhynchoidea Woodward 1890.....Belonorhynchina
Suborder Acipenseroidea Agassiz 1843.....Acipenserina
Order Holostei J. Müller 1846.....Holostida
Suborder Semionotoidea Woodward 1890.....Semionotina
Suborder Amioidea Huxley 1861.....Amioidina
Suborder Pholidophoroidea Woodward 1890.....Pholidophorina
Order Teleostei Owen 1847.....Teleostida
Suborder Isospondyli Cope 1872.....Isospondylina

Suborder Ostariophysi Boulenger 1909.....Ostariophysina
Suborder Apodes Rafinesque 1815.....Apodina
Suborder Haplomi Cope 1872.....Haplomina
Suborder Microcyprines Reagan 1911.....Microcyprina
Suborder Percesoces Cope 1871.....Percesocina
Suborder Hemibranchii Cope 1871.....Hemibranchina
Suborder Anacanthini J. Müller.....Anacanthina
Suborder Acanthopterygii Cuvier 1828.....Acanthopterygina
Subclass Crossopterygii Huxley 1861.....Crossopterygia
Order Rhipidistia Cope 1887.....Rhipidistida
Order Coelacanthini Agassiz 1843.....Coelacanthida
Superclass Tetrapoda Williston
Class Amphibia Linnaeus 1758.....Amphibea
Order *Labyrinthodontia Huxley 1871.....Labyrinthodontida
Suborder Ichthyostegalia Save-Soderbergh 1934 .....Ichthyostegalina
Suborder *Embolomeri Cope 1880.....Embolomerina
Suborder *Rhachitomi Cope 1882.....Rhachitomina
Suborder *Stereospondyli Fraas 1889.....Sterospondylina
Order *Lepospondyli Zittel 1887.....Lepospondylida
Suborder *Micramphibia .....Micramphibia
Suborder *Lysorophia Cope.....Lysorophina
Suborder *Aistopoda Miall 1890.....Aistopodina
Suborder Nectridia Miall 1890.....Nectridina
Order *Phyllospondyli Credner 1881.....Phyllospondylida
Order Caudata Oppel 1811.....Caudatida
Suborder Cryptobranchoidea Dunn 1922.....Cryptobranchina
Suborder Ambystomoidea Noble 1931.....Ambystomina
Suborder Salamandroidea Cope 1890.....Salamandrina
Suborder Proteida Cope 1866.....Proteina
Suborder Meantes Linnaeus 1766.....Meantina
Order Salientia Laurenti 1768.....Salientida
Suborder Amphicoela Noble 1931.....Amphicoelina
Suborder Opisthocoela Nicholls 1916.....Opisthocoelina
Suborder Anomocoela Nicholls 1916.....Anomocoelina
Suborder Procoela Nicholls 1916.....Procoelina
Suborder Diplasiocoela Nicholls 1916.....Diplasiocoelina
Order Apoda Oppel 1811.....Apodida
Class Reptilia Laurenti 1768.....Reptilea
Subclass Anapsida Osborn 1918.....Anapsidea
Order *Cotylosauria Cope 1880.....*Cotylosaurida
Suborder *Seymouriamorpha Watson 1917.....*Seymouriamorphina
Suborder *Diadectomorpha Case 1911.....*Diadectomorphina
Suborder *Captorhinomorpha Watson 1917.....*Captorhinomorphina
Order Chelonia Owen 1842 (Testudinata) (Oppel 1811) .....Chelonida (Testudinida)
Suborder Eunotosauria Watson 1914.....Eunotosaurina
Suborder Amphichelydia Lydekker 1889.....Amphichelina
Suborder Pleurodira Cope 1869.....Pleurodirina
Suborder Cryptodira Cope 1869.....Crytodirina

Subclass *Ichthtyopterygia Owen 1860.....*Ichthyopterygia
Order *Mesosauria Cope 1886.....*Mesosaurida
Order *Ichthyosauria Blainville 1835.....*Ichthyosaurida
Subclass *Synaptosauria Williston 1912.....*Synaptosauria
Order *Proterosauria Seeley 1871.....*Proterosaurida
Order *Sauropterygia Owen 1859.....*Sauropterygida
Suborder *Trachelosauria Broili 1917.....*Trachelosaurina
Suborder *Tanysitrachelia Preyer 1931.....*Tanysitrachelina
Suborder *Nothosauria Deecke 1886.....*Nothosaurina
Suborder *Plesiosauria Andrews 1895.....*Plesiosaurina
Suborder *Placodontia Meyer 1863.....*Placodontina
Subclass Lepidosauria Zittel 1890.....Lepidosauria
Order *Eusuchia Huxley 1875.....*Eusuchida
Order Rhynchocephalia Gunther 1886.....Rhynchocephalida
Order Eosuchia Broom 1714.....Eosuchida
Order Squamata Oppel 1811.....Squamatida
Suborder Lacertilia Cuvier 1834.....Lacertilina
Suborder Ophidia Brongriart 1799.....Ophidida
Subclass *Archosauria Cope 1891.....*Archosauria
Order *Thecodontia Owen 1860.....*Thecodontida
Suborder *Pseudosuchia Cope 1891.....*Pseudosuchina
Suborder *Phytosauria Lydekker 1888.....*Phytosaurina
Order Crocodilia Wagler 1830.....Crocodilida
Suborder *Protosuchia Mook 1934.....*Protosuchina
Suborder Mesosuchia Mook 1934.....Mesosuchina
Suborder Eusuchia Mook 1934.....Eusuchina
Suborder Thallatosuchia Mook 1934.....Thallatosuchina
Order *Pterosauria Kaup 1834.....*Pterosaurida
Suborder *Rhamphorhynchoidii Abel 1919.....*Rhamphorhynchina
Suborder *Pterodactyloidea Seeley 1866.....*Pterodactylina
Order *Saurischia Seeley 1888.....*Saurischida
Suborder *Theropoda Marsh 1881.....*Theropodina
Suborder *Sauropoda Marsh 1878.....*Sauropodina
Order *Ornithischia Seeley 1888.....*Ornithischida
Suborder *Ornithopoda Cope 1869.....*Ornithopodina
Suborder *Stegosauria Cope 1880.....*Stegosaurina
Suborder *Ankylosauria Brown 1908.....*Ankylosaurina
Suborder *Ceratopsia Zittel 1890.....*Ceratopsina
Subclass *Synapsida Osborn 1903.....*Synapsidia
Order *Pelycosauria Cope 1878.....*Pelycosaurida
Order *Therapsida Broom 1905.....*Therapsida
Suborder *Anningiamorpha Broom 1927.....*Anningiamorphina
Suborder *Dromaesauria Matthew & Brown
1922 .....*Dromaesaurina
Suborder *Dinocephalia Broom 1914.....*Dinocephalina
Suborder *Dicynodontia Owen 1859.....*Dicynodontina
Suborder *Theriodontia Owen 1876.....*Theriodontina
Suborder *Ictidosauria Broom 1912.....*Ictidosaurina
Suborder *Protodonta Osborn 1887.....*Protodontina

Class Aves Linnaeus 1758.....Avea
Subclass *Archaeornithes Cope 1898.....*Archaeornithia
Order *Archaeopterygiformes Fürbringer 1888 .....*Archaeopterygida
Subclass Neornithes Reynolds 1897.....Neornithia
Superorder *Odontognathae Marsh 1873.....*Odontognatha
Order *Hesperornithiformes Marsh 1872.....*Hesperornithida
Order *Ichthyornithiformes Marsh 1873.....*Ichthyornithida
Superorder Palaeognathae Pycraft 1910.....Palaeognathea
Order Struthioniformes Haeckel 1866.....Struthionida
Order Rheiformes Newton 1884.....Rheida
Order Casuariiformes Sclater 1880.....Casuariida
Order Dinornithidae Stejneger 1884.....Dinornithida
Order Aepyornithiformes Newton 1884.....Aepyornithida
Order Apterygiformes Sclater 1880.....Apterygida
Order Tinamiformes Gray 1840.....Tinamida
Superorder Impennes Illiger 1811.....Impennea
Order Sphenisciformes Viellot 1818.....Spheniscida
Superorder Neognathae Pycraft 1896.....Neognathea
Order Gaviiformes Brandt 1839.....Gaviida
Order Procellariiformes Wagner 1843.....Procellariida
Order Pelecaniformes Stejneger 1885.....Pelecanida
Suborder Phaethontes Gray 1840.....Phaethontina
Suborder Pelecani Owen 1856.....Pelecanina
Suborder Fregatae Vigors 1830.....Fregatina
Suborder Odontopteryges Lydekker 1892.....Odontopterygina
Order Ciconiiformes Owen 1832.....Ciconiida
Suborder Ardeae Wagler 1830.....Ardina
Suborder Balaenicipites .....Balaenicipitina
Suborder Ciconiae Bonaparte 1834.....Ciconina
Suborder Phoenicopteri Bonaparte 1831.....Phoenicopterina
Order Anseriformes Swainson 1837.....Anserida
Suborder Anhimae .....Anhimina
Suborder Anseres Linnaeus 1735.....Anserina
Order Falconiformes Naumann 1822.....Falconida
Suborder Cathartidae Lafresnaye 1829.....Cathartina
Suborder Falcones Naumann 1822.....Falconina
Order Galliformes Latreille 1825.....Gallida
Suborder Galli Dumeril 1806.....Gallina
Suborder Opisthocomi Gray 1840.....Opisthocomina
Order Gruiformes Stejneger 1885.....Gruida
Suborder Mesoenatides Lowe 1924.....Mesoenatidina
Suborder Turnices Gray 1840.....Turnicina
Suborder Grues Owen 1856.....Gruina
Suborder Heliornithes Gray 1840.....Heliornithina
Suborder Rhynocheti .....Rhynochetina
Suborder Eurypygae .....Eurypygina
Suborder Phororhaci Lydekker 1893.....Phororhacina
Suborder Cariamae .....Cariamina
Suborder Otides Wagler 1830.....Otidina
Order Diatrymiformes Cope 1877.....Diatrymida

Order Charadriiformes Fürbringer 1888.....Charadriida
Suborder Charadrii Huxley 1867.....Charadriina
Suborder Lari Bonaparte 1857.....Larina
Suborder Alcae Stejneger 1885.....Alcina
Order Columbiformes Bonaparte 1853.....Columbida
Suborder Pterocletes Knowlton 1909.....Pterocletina
Suborder Columbae Bonaparte 1857.....Columbina
Order Psittaciformes Illiger 1811.....Psittacida
Order Cuculiformes Stejineger 1884.....Cuculida
Suborder Musophagi Sharpe 1891.....Musophagina
Suborder Cuculi Sharpe 1891.....Cuculina
Order Strigiformes Wagler 1830.....Strigida
Order Caprimulgiformes Stejneger 1885.....Caprimulgida
Suborder Steatornithes Bonaparte 1850.....Steaornithina
Suborder Caprimulgai Bonaparte 1840.....Caprimulgina
Order Micropodiformes Lucas 1889.....Micropodida
Suborder Micropodi .....Micropodina
Suborder Trochili Lesson 1831.....Trochilina
Order Coliiformes Swainson 1837.....Coliida
Order Trogoniformes Swainson 1831.....Trogonida
Order Coraciiformes Seebohm 1880.....Coraciida
Suborder Alcedines Bonaparte 1831.....Alcedina
Suborder Meropes Bonaparte 1831.....Meropina
Suborder Coracii Gray 1845.....Coracina
Suborder Bucerotes Fürbringer 1888.....Bucerotina
Order Piciformes Sharpe 1891.....Picida
Suborder Galbulae Fürbringer 1888.....Galbulina
Suborder Pici Wagler 1830.....Picina
Order Passeriformes Nitzsch 1829.....Passerida
Suborder Eurylaimi Gadow 1893.....Eurylaimina
Suborder Tyranni Swainson 1837.....Tyrannina
Suborder Menurae Stejneger 1885.....Menurina
Suborder Passeres Linnaeus 1758.....Passerina
Class Mammalia Linnaeus 1758.....Mammalea
Subclass Prototheria Gill 1872.....Prototheria
Order Monotremata Tiedemann 1808.....Monotremida
Subclass *Allotheria Marsh 1880.....*Allotheria
Order *Multituberculata Cope 1884.....*Multituberculida
Suborder *Tritylodontoidea Simpson 1928.....*Tritylodontina
Suborder *Plagiaulacoidea Simpson 1928.....*Plagiaulacina
Order *Triconodonta Osborn, 1888.....*Triconodontida
Subclass Theria Parker & Haswell 1897.....Theria
Superorder *Pantotheria Marsh 1880.....*Pantotherea
Order *Pantotheria Marsh 1880.....*Pantotherida
Order *Symmetrodonta Simpson 1925.....*Symmetrodontida
Superorder Metatheria Huxley 1880.....Metatherea
Order Marsupialia Illiger 1811.....Marsupialida
Superorder Eutheria Gill 1872.....Eutherea
Order Insectivora Gray 1827.....Insectivorida
Order *Tillodontia Marsh 1875.....*Tillodontida
Order Dermoptera Illiger 1811.....Dermopterida

Order Chiroptera Blumenbach 1779.....Chiropterida
Suborder Megachiroptera Dobson 1875.....Megachiropterina
Suborder Microchiroptera Dobson 1875.....Microchiropterina
Order Primates Linnaeus 1758.....Primatida
Suborder Lemuroidea Mivart 1864.....Lemurina
Suborder Tarsioidea Weber 1928.....Tarsina
Suborder Anthropoidea Mivart 1864.....Anthropoidina
Order *Taeniodonta Cope 1876.....*Taeniodontida
Order Edentata Vicq-d'Azyr 1792.....Edentatida
Suborder *Palaeanodonta Matthew 1918.....*Palaenodontina
Suborder Xenarthra Gill 1884.....Xenarthrina
Suborder Loricata Owen 1882.....Loricatina
Suborder Pholidota Weber 1904.....Pholidotina
Order Rodentia Vicq-d'Azyr 1792.....Rodentida
Order Lagomorpha Brandt 1859.....Lagomorphida
Order Carnivora Vicq-d'Azyr 1792.....Carnivorida
Suborder *Creodonta Cope 1875.....*Creodontina
Suborder Fissipedia Fischer von Waldheim 1813 .....Fissipedina
Suborder Pinnipedia Storr 1780.....Pinnipedina
Order Cetacea Blumenbach 1779.....Cetacida
Suborder *Archaeoceti Flower 1883.....*Archaeocetina
Suborder Odontoceti Flower 1864.....Odontocetina
Suborder Mysticeti Flower 1864.....Mysticetina
Order *Condylarthra Cope 1881.....*Condylarthrida
Order Tubulidentata Huxley 1872.....Tubulidentida
Order *Amblypoda Cope 1875.....*Amblypodida
Order *Dinocerata Marsh 1872.....*Dinoceratida
Order *Notoungulata Roth 1903.....*Notoungulatida
Suborder *Entelonychia Ameghino 1893.....*Entelonychina
Suborder *Astrapotheria Ameghino 1893.....*Astrapotherina
Suborder *Toxodontia Owen 1858.....*Toxodontina
Suborder *Typotheria Zittel 1893.....*Typotherina
Order *Pyrotheria Ameghino 1895.....*Pyrotherida
Order *Litopterna Ameghino 1889.....*Litopternida
Order Proboscidea Illliger 1811.....Proboscida
Order *Barytheria Andrews 1904.....*Barytherida
Order Hyracoidea Huxley 1872.....Hyracida
Order Sirenia Illiger 1811.....Sirenida
Suborder Trichechiformes Hay 1923.....Trichechina
Suborder *Desmostyiformes Hay 1923.....*Desmostylina
Order Embrithopoda Andrews 1905.....Embrithopodida
Order Perissodactyla Owen 1848.....Perissodactylida
Order Artiodactyla Owen 1848.....Artiodactylida
Suborder Bunodonta Kowalevsky 1873.....Bunodontina
Suborder *Anconodonta Matthew 1929.....*Anconodontina
Suborder Tylopoda Illiger 1811.....Tylopodina
Suborder Pecora Linnaeus 1758.....Pecorina